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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
CHEN, JUNPENG	

ART UNIT	PAPER NUMBER
2631	

DATE MAILED: 07/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/511,842	KIM, YONG KYU	
	Examiner	Art Unit	
	Junpeng Chen	2631	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 October 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6 and 8-20* is/are rejected.

7)☒ Claim(s) *7* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *19 October 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *10/19/2004* and 12/14/2005
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 371 and 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The information disclosure statements submitted on October 19, 2004 and December 14, 2005 has been considered by the Examiner and made of record in the application file.

Objection - Specification

3. The disclosure is objected to because of the following informalities:

a) On **line 14** of **page 2**, replace "si gnal" with --signal--.

b) On **line 1** of **page 7**, delete the spaces between "Hereinafter," and "the construction" and leave only 1 space between them.

c) Swap **lines 28-32** on **page 10** with **lines 15-17** on **page 11** in order to keep the description to be consistent with the current invention.

Objection - Drawing

Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid

abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Appropriate correction is required.

Objection - Claims

4. Claim 19 is objected to because of the following informalities:

a) On **line 3** of **claim 19**, replace "amplifying the RF signal" with --allowing the RF signal to pass through--.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6, 11-12 and **16-20** are rejected under 35 U.S.C. 102(b) as being anticipated by **Bae et al. (U.S. Patent No. 5,638,141)**.

Consider **claim 1**, Bae et al. shows and discloses a low noise amplifier used for an RF (Radio Frequency) receiver having an antenna, an input tuner, an amplifier and a detector, the low noise amplifier comprising:

an RF amplification control circuit unit for controlling an amplification of an RF signal depending on an electric field intensity of the RF signal (read as combination of controller 30 and control switch 18, where controller 30 determines whether the signal received from the antenna is strong or weak on the basis of the AGC signal and for outputting control signal based on the determination result to selection control terminal of control switch 18, Fig. 2, line 65 of column 2 to line 2 of column 3);

a low noise amplification circuit unit for amplifying the RF signal under control of the RF amplification control circuit unit (read as first selection of control switch 18 was selected under control of controller 30 and LNA 20 amplifies the signal from the antenna, Fig. 2, line 54 of column 2 to line 2 of column 3); and

a through circuit unit for allowing the RF signal to pass therethrough under control of the RF amplification control circuit unit (read as second selection of control switch 18 was selected under control of controller 30 to let the signals pass through, Fig. 2, line 54 of column 2 to line 2 of column 3).

Consider **claim 2, as applied to claim 1 above**, Bae et al. discloses the low noise amplifier, wherein the RF amplification control circuit unit compares an input level outputted from the detector with a reference level to allow the low noise amplification circuit unit or the through circuit unit selectively to be in operation (read as controller 30 compares the output from AGC 28 with a reference that inherently exists in the memory

of controller 30 to control the selection switch 18 to either select first selection or second selection, lines 18-36 of column 4).

Consider **claim 3, as applied to claim 1 above**, Bae et al. discloses the low noise amplifier, wherein the low noise amplification control circuit unit is switched under control of the RF amplification control circuit unit, and amplifies and outputs the RF signal inputted through the antenna when a weak electric-field signal is inputted (read as if the RF signal from the antenna is weak, control switch 18 is set to first selection contract so that LNA 20 would amplifies the RF signal, Fig. 2, lines 18-36 of column 4).

Consider **claim 4, as applied to claim 1 above**, Bae et al. discloses the low noise amplifier, wherein the through circuit unit is switched under control of the RF amplification control circuit unit, and allows the RF signal inputted through the antenna to pass therethrough when a strong electric-field signal is inputted (read as if the RF signal from the antenna is strong, control switch 18 is set to second selection contract to let the signals pass through, Fig. 2, lines 18-36 of column 4).

Consider **claim 5, as applied to claim 1 above**, Bae et al. discloses the low noise amplifier, wherein the RF amplification control circuit unit comprises a logic IC (Integrated Circuit) for comparing the input level outputted from an output terminal of the detector with the reference level to output a high/low level signal (read as the controller 30 compares the output of AGC 28 and a inherently existed reference in the memory of controller 30 to determine which selection of selection switch to set, in order perform the determination, a comparator must exists in controller 30 and this comparator is inherently to be logic IC, Fig. 2, lines 6-36 of column 4).

Consider **claim 6, as applied to claim 5 above**, Bae et al. discloses the low noise amplifier, wherein the RF amplification control circuit unit further comprises a switching unit connected to the logic IC, for switching depending on an output signal of the logic IC (read as selection switch 18 connects to the comparator in controller 30 is set to either first selection contact or second selection contact depending on the output of the comparator, Fig. 2, lines 6-36 of column 4).

Consider **claim 11**, Bae et al. discloses a logic low noise amplifier comprises:

an RF amplification control circuit unit for controlling an amplification of an RF (Radio Frequency) signal depending on electric field intensity of the RF signal (read as combination of controller 30 and control switch 18, where controller 30 determines whether the signal received from the antenna is strong or weak on the basis of the AGC signal and for outputting control signal based on the determination result to selection control terminal of control switch 18, Fig. 2, line 65 of column 2 to line 2 of column 3);

a low noise amplification circuit unit for amplifying the RF signal under control of the RF amplification control circuit unit (read as first selection of control switch 18 was selected under control of controller 30 and LNA 20 amplifies the signal from the antenna, Fig. 2, line 54 of column 2 to line 2 of column 3); and

a through circuit unit for allowing the RF signal to pass therethrough under the control of the RF amplification control circuit unit (read as second selection of control switch 18 was selected under control of controller 30 to let the signals pass through, Fig. 2, line 54 of column 2 to line 2 of column 3).

Consider **claim 12, as applied to claim 11 above**, Bae et al. discloses a logic low noise amplifier, wherein the RF amplification control circuit unit further comprises a logic IC, and a switching unit connected with the logic IC (read as controller 30 inherently comprises a comparator, which is a logic IC that connects to selection switch 18, Fig. 2, lines 6-36 of column 4).

Consider **claim 16**, Bae et al. discloses a RF receiver having a low noise amplifier with a low noise amplification circuit unit, an input tuner, an amplifier and a detector (read as LNA 20, Tuner 22, multi-stage IF amplifier in the IF signal processor 26, and AGC 28, Fig. 2, line 54 of column 2 to line 37 of column 3), which this RF receiver is inherently capable of performing a control method comprising:

a first step of checking an on/off state of the low noise amplification circuit unit (read as the controller 30 is inherently capable of knowing the selections of selection switch 18 to see if LNA 20 is connecting to selection switch 18 or not, Fig. 2),

a second step of comparing a control voltage with a reference level for turning off the low noise amplification circuit unit in case that the low noise amplification circuit unit is in the on state as a check result of the first step, and comparing the control voltage with a reference level for turning on the low noise amplification circuit unit in case that the low noise amplification circuit unit is in the off state (read as controller 30 compares the output of AGC 28 with a inherently existed reference in the controller 30 to set selection switch 18 to second selection contact if it was set to first selection contact, and to set selection switch 18 to first selection contact if it was set to second selection contact, lines 18-36 of column 4); and

a third step of selecting whether amplification or passage of the RF signal depending on the check result of the second step (read as controller 30 determines to whether set selection 18 to first selection contact or second selection contact, lines 27-36 of column 4).

Consider **claim 17, as applied to claim 16 above**, Bae et al. discloses a control method further comprising a step of maintaining a current state and amplifying the RF signal in case that the low noise amplification circuit unit is in the on state as the check result of the first step and the control voltage is more than the reference level for turning of the low noise amplification circuit unit as a check result of the second step (read as the controller 30 is capable of keeping the selection switch 18 at its first selection contact when the output from the AGC 28 is more than the reference in the memory of controller 30, lines 18-36 of column 4).

Consider **claim 18, as applied to claim 16 above**, Bae et al. discloses a control method comprising a step of outputting a switch control for turning off the low noise amplification circuit unit, and allowing the RF signal to pass through in case that the low noise amplification circuit unit is in the on state as the check result of the first step and the control voltage is less than the reference level for turning off the low noise amplification circuit unit as the check result of the second step (read as the controller 30 is capable of change the selection switch 18 from its first selection contact to second selection contact when the output from the AGC 28 is less than the reference in the memory of controller 30, lines 18-36 of column 4).

Consider **claim 19, as applied to claim 16 above**, Bae et al. discloses a control method further comprising a step of maintaining the current state, and *allowing the RF signal to pass through* (See ***Objection - Claims*** above) check in case that the low noise amplification circuit unit is in the off state as the check result of the first step and the control voltage is les than the reference level for turning on the low noise almplification circuit unit as the check result of the second step (read as the controller 30 is capable of keeping the selection switch 18 at its second selection contact when the output from the AGC 28 is less than the reference in the memory of controller 30, lines 18-36 of column 4).

Consider **claim 20, as applied to claim 16 above**, Bae et al. discloses a control method further comprising a step of outputting a switch control for turning on the low noise amplification circuit unit, and amplifying the RF signal in case that the low noise amplification circuit unit is in the of state as the check result of the first step and the control voltage is more than the reference level for turning on the low noise amplification circuit unit as the check result of the second step (read as the controller 30 is capable of change the selection switch 18 from its second selection contact to first selection contact when the output from the AGC 28 is more than the reference in the memory of controller 30, lines 18-36 of column 4).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Bae et al. (U.S. Patent No. 5,638,141)** in view of **Lee, Y B (K.R. Patent No. 2003-0004791 A)**.

Consider **claim 8, as applied to claim 1 above**, Bae et al. discloses a low noise amplifier, wherein the RF amplification control circuit unit comprises the logic IC for comparing the input level outputted from the detector with the reference level to output the high/low level signal (read as controller 30 inherently comprises a comparator, which is a logic IC that compares the output from AGC 28 and the inherently existed reference in the memory of the controller 30 to set the selection switch 18 to have first selection contact or second selection contact, Fig. 2, lines 6-36 of column 4),

However, Bae et al. fails specifically discloses that the RF amplification control circuit unit allows the reference level at the time of the outputting the high level signal to be different from the reference level at the time of the low level signal and allows the reference level at the time of outputting the low level signal to be more than the

reference level at the time of outputting the high level signal such that the reference level of the logic IC have a hysteresis characteristic.

Nonetheless, in related art, Lee, Y B discloses a logic IC (read as Schimtt trigger circuit part 25, Fig. 2, line 15 of page 6 to line 20 of page 7 of the English translation copy provided by examiner), which inherently has a hysteresis characteristic. The Schimtt trigger taught by Lee, Y B has two reference voltages, which first reference is different from the second reference (Description related to Fig. 2 and Fig. 3, line 15 of page 6 to line 2 of page 11). Furthermore, the reference level at the time of outputting the low level signal (read as switch voltage supplied as an ON voltage, Description related to Fig. 2 and Fig. 3, line 15 of page 6 to line 2 of page 11) to be more than the reference level at the time of outputting the high level signal (read as switch voltage supplied as an OFF voltage, Description related to Fig. 2 and Fig. 3, line 15 of page 6 to line 2 of page 11).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Lee, Y B. into the teachings of Bae et al. to be able to realize a more stable low-noise amplification as a result of reducing the instant repetition of the operation and the non-operation of the low-noise amplifier.

Claims 9-10 and **13-15** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Bae et al. (U.S. Patent No. 5,638,141)** in view of **Goto Ryoji (J.P. Patent No. 09072955 A)**.

Consider **claim 9, as applied to claim 1 above**, Bae et al. discloses the limitations above and the low noise amplification circuit unit in the low noise amplifier comprises an amplifying unit for amplifying and outputting the RF signal inputted through the antenna.

However, Bae et al. fails to discloses that the low noise amplification circuit unit in this low noise amplifier comprises: a first diode connected between the antenna and the amplifying unit; and a second diode connected between the amplifying unit and the input tuner.

Nonetheless, in related field, Goto Ryoji discloses an amplifying circuit (read as the switch 2a connects to amplifier 3a and then connects to switch 4a, Fig. 1, paragraphs [0017]-[0020]) where switch 2a is connected between an inherently existed antenna and the amplifier 3a; and switch 4a is connected between the amplifier 3a and the tuner circuit, which comprises mixer 5a (Fig. 1, paragraphs [0017]-[0020]).

However, Goto Ryoji fails to specifically disclose that switches 2a and 4a are diodes. Nonetheless, the Examiner takes Official Notice of the fact that it is well-known in the art that diodes are being widely used as switches and it would be obvious for a person with ordinary skill in the art to use diodes as switches to improve reliability of the circuit.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Goto Ryoji into the teachings of Bae et al. for the purpose of improving the reliability of the low noise amplification unit circuit.

Consider **claim 10, as applied to claim 1 above**, Bae et al. discloses the limitations above but fails to discloses that the through circuit unit wherein the low noise amplifier comprises: a first diode connected in parallel with the low noise amplification circuit unit and connected with the antenna; and a second diode connected between the first diode and the input tuner.

Nonetheless, in related field, Goto Ryoji discloses an through circuit unit (read as switch 2a connects switch 4a through a wire, Fig. 1) wherein the low noise amplifier comprises: switch 2a connected in parallel with anio amplifying circuit (read as the switch 2a connects to amplifier 3a and then connects to switch 4a, Fig. 1, paragraphs [0017]-[0020]) and connected with a inherently existed antenna; and switch 4a connected between the switch 2a and the tuner circuit, which comprises mixer 5a (Fig. 1, paragraphs [0017]-[0020]).

However, Goto Ryoji fails to specifically disclose that switches 2a and 4a are diodes. Nonetheless, the Examiner takes Official Notice of the fact that it is well-known in the art that diodes are being widely used as switches and it would be obvious for a person with ordinary skill in the art to use diodes as switches to improve reliability of the circuit.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Goto Ryoji into the teachings of Bae et al. for the purpose of improving the reliability of the circuit.

Consider **claim 13, as applied to claim 11** above, Bae et al. discloses the limitations above but fails to discloses that the low noise implication circuit unit in the

logic low noise amplifier further comprises an amplifying unit, a first diode connected between the antenna and the amplifying unit, and a second diode connected between the amplifying unit and the input tuner.

Nonetheless, in related field, Goto Ryoji discloses an amplifying circuit (read as the switch 2a connects to amplifier 3a and then connects to switch 4a, Fig. 1, paragraphs [0017]-[0020]) where switch 2a is connected between an inherently existed antenna and the amplifier 3a; and switch 4a is connected between the amplifier 3a and the tuner circuit, which comprises mixer 5a (Fig. 1, paragraphs [0017]-[0020]).

However, Goto Ryoji fails to specifically disclose that switches 2a and 4a are diodes. Nonetheless, the Examiner takes Official Notice of the fact that it is well-known in the art that diodes are being widely used as switches and it would be obvious for a person with ordinary skill in the art to use diodes as switches to improve reliability of the circuit.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Goto Ryoji into the teachings of Bae et al. for the purpose of improving the reliability of the low noise amplification unit circuit.

Consider **claim 14, as applied to claim 11 above**, Bae et al. discloses the limitations above but fails to discloses that the through circuit unit in the logic low noise amplifier further comprises a first diode connected in parallel with the low noise amplification circuit unit and connected with the antenna, and a second diode connected between the first diode and the input tunner.

Nonetheless, in related field, Goto Ryoji discloses an through circuit unit (read as switch 2a connects switch 4a through a wire, Fig. 1) wherein the low noise amplifier comprises: switch 2a connected in parallel with an amplifying circuit (read as the switch 2a connects to amplifier 3a and then connects to switch 4a, Fig. 1, paragraphs [0017]-[0020]) and connected with a inherently existed antenna; and switch 4a connected between the switch 2a and the tuner circuit, which comprises mixer 5a (Fig. 1, paragraphs [0017]-[0020]).

However, Goto Ryoji fails to specifically disclose that switches 2a and 4a are diodes. Nonetheless, the Examiner takes Official Notice of the fact that it is well-known in the art that diodes are being widely used as switches and it would be obvious for a person with ordinary skill in the art to use diodes as switches to improve reliability of the circuit.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Goto Ryoji into the teachings of Bae et al. for the purpose of improving the reliability of the circuit.

Consider **claim 15, as applied to claim 11 above**, Bae et al. discloses the limitation above and an RF amplification control unit in a logic low noise amplifier comprises the logic IC and the switching unit connected with the logic IC.

However, Baet et al. fails to discloses wherein the low noise amplification circuit unit further comprises the amplifying unit and the first diode connected between the antenna and the amplifying unit, and the second diode connected between the amplifying unit and the input tuner, and wherein the through circuit unit is connected in

parallel with the low noise amplification unit and further comprises a third diode connected with the antenna and a fourth diode connected between the third diode and the input tuner

Nonetheless, in related field, Goto Ryoji discloses an amplifying circuit (read as the switch 2a connects to amplifier 3a and then connects to switch 4a, Fig. 1, paragraphs [0017]-[0020]) where switch 2a is connected between an inherently existed antenna and the amplifier 3a; and switch 4a is connected between the amplifier 3a and the tuner circuit, which comprises mixer 5a (Fig. 1, paragraphs [0017]-[0020]) and an through circuit unit (read as switch 2a connects switch 4a through a wire, Fig. 1) wherein the low noise amplifier comprises: switch 2a connected in parallel with an amplifying circuit (read as the switch 2a connects to amplifier 3a and then connects to switch 4a, Fig. 1, paragraphs [0017]-[0020]) and connected with a inherently existed antenna; and switch 4a connected between the switch 2a and the tuner circuit, which comprises mixer 5a (Fig. 1, paragraphs [0017]-[0020]).

However, Goto Ryoji fails to specifically disclose that switch 2a comprises two diodes and switch 4a comprises two diodes. Nonetheless, the Examiner takes Official Notice of the fact that it is well known in the art that diodes are being widely used as switches and it would be obvious for a person with ordinary skill in the art to design each switch to comprise two switches to achieve a desired circuit design.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Goto Ryoji into the teachings of Bae et al. for the purpose of improving the reliability of the circuit.

Allowable Subject Matter

7. Claim 7 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Nguyen et al.	US 20040189388 A1	Variable transconductance variable gain amplifier utilizing a degenerated differential pair
Hughes	US 6668164 B2	Method and apparatus for reducing intermodulation distortion in a low current drain automatic gain control system
Black	US 6181201 B1	Automatic gain control circuit for controlling multiple variable gain amplifier stages while estimating received signal power
Hutchison, IV et al.	US 5722061 A	Method and apparatus for increasing receiver immunity to interference
Wilson	US 5627857 A	Linearized digital automatic gain control
Suganuma et al.	US 5507023 A	Receiver with an AGC circuit capable of expanding a dynamic range
Warren U. Amfahr	US 3581210 A	RF T-PAD LOW IMPEDANCE COUPLING CIRCUIT ATTENUATOR WITH AGC VOLTAGE CONTROL

9. Any response to this Office Action should be **faxed to** (571) 273-8300 **or mailed to**:

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Hand-delivered responses should be brought to

Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Junpeng Chen whose telephone number is (571) 270-1112. The examiner can normally be reached on Monday - Thursday, 8:00 a.m. - 5:00 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rafael Perez-Gutierrez can be reached on 571-272-7915. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Junpeng Chen
J.C./jc

June 19, 2006

RAFAEL PEREZ-GUTIERREZ
PRIMARY EXAMINER
6/25/06